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REMARKS

Claims 1-7, 9-17, and 37-53 are pending in the present Application. Claims 1, 43, and 53 have been amended, leaving Claims 1-7, 9-17, and 37-53 for consideration upon entry of the present Amendment.

Claims 1, 43, and 53 have been amended to correct a typographical error and to replace the term --alkoxy alkyl acetates-- with "methoxy ethyl acetate." Support for this amendment can at least be found in Claim 9 as originally filed as well as in Paragraph [0033] as originally filed.

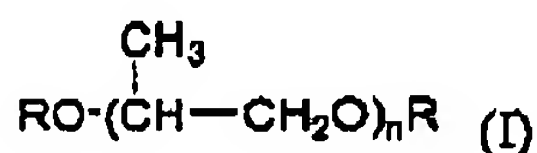
No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 102(b)

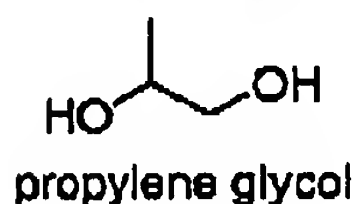
Claims 1, 7, 9-11, 14-17, 38, and 51-53 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 5,916,632 to Mishina et al. ("Mishina"). Applicants respectfully disagree.

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Varient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987).

Mishina generally teaches a polyimide varnish that is a solution having a polyimide and/or a polyimide precursor dissolved in an organic solvent. The organic solvent must contain from 5 wt % to 60 wt % of a propylene glycol derivative of the formula (I)



wherein n is 1 or 2, and R is hydrogen, a C₁₋₄ alkyl group, a C₁₋₄ alkenyl group or a C₁₋₄ alkanoyl group. The propylene glycol derivatives all contain a propylene glycol unit:

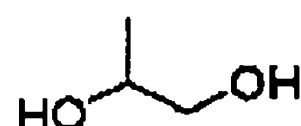


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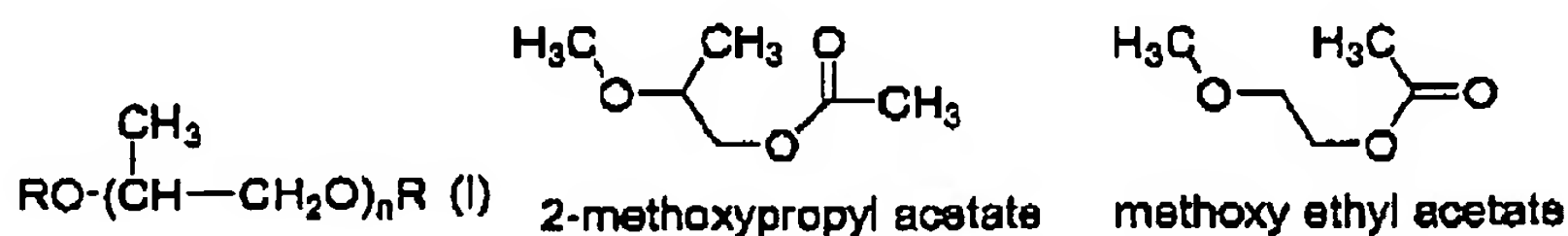
Independent claims 1 and 53 are directed to spin coating processes to dispense a solution solvent and a thermoplastic polymer, where the solution solvent *consists of* a material selected from the group consisting of aryl acetates and C₄ – C₁₀ alkyl acetates, C₂-C₆ alkyl carbonates, formamides, C₁-C₆ N-alkyl formamides, C₁-C₆ alkyl sulfoxides, methoxy ethyl acetate, C₁-C₆ N-alkyl pyrrolidones, phenols, C₁-C₆ alkyl phenols, aryl ethers, C₁-C₆ alkyl aryl ethers, C₁-C₆ alkyl ureas, C₄-C₆ sulfolanes, N-acetyl cyclic ethers, C₁-C₆ alkyl acetamides, C₁-C₆ alkyl phosphoramides, C₃-C₆ lactones, aryl alkyl ketones, and miscible combinations comprising at least one of the foregoing materials. Additional materials are not included in the solution solvent (note the “consists of” language). The resulting coated substrate has a coating having less than or equal to 10 asperities over the entire surface of the coated substrate.

Mishina fails to anticipate either independent claim 1 or 53 as Mishina fails to teach the required limitation of the particular solvent and the required limitation of asperities in the resulting coating. Particularly, Mishina cannot form a smooth film without the use of a propylene glycol derivative of the formula (I). Indeed Mishina states that it was impossible to obtain a smooth film without the propylene glycol derivative. (Col. 6, lines 10 – 12, 23 – 25, 36 – 39, and 46 – 48; emphasis added) The independent claims 1 and 53 do not require a propylene glycol derivative.

The Examiner has stated that Mishina teaches methoxy ethyl acetate according to formula (I) by selecting n=1 and R to be C₁ alkanoyl group and C₂ alkyl group. The Applicants respectfully disagree as the propylene glycol derivatives of Mishini all require a



propylene glycol unit propylene glycol. The closest compound if the appropriate R groups were selected would be 2-methoxypropyl acetate, shown below, and not methoxy ethyl acetate.



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None of the other materials provided in the two claims contains a propylene glycol derivative as required by Mishina in order to obtain smooth films. It is particularly noted that alkyl acetates are not the same as propylene glycol acetates as the alkyl acetates are missing the second oxygen functionality. Accordingly, the Applicants have provided a spin coating process to form a coating having limited asperities using solvents that do not include propylene glycol derivatives such as propylene glycol acetates.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 2-6, 12-13, 37, 42-44, and 47-48 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Mishina. Applicants respectfully disagree.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Claims 2-6, 12-13, and 37 all ultimately depend from independent claim 1. As mentioned previously, Mishina fails to teach or suggest each limitation of independent claim 1, particularly a spin coating process using one or more of the particular set of materials for the solution solvent to result in a coating having less than or equal to 10 asperities over the entire surface of the coated substrate.

Mishina fails to provide any motivation for one of ordinary skill in the art to modify its teachings. Indeed, Mishina teaches that it is necessary to add a propylene glycol derivative to obtain a smooth film. Therefore, one of ordinary skill in the art would not be motivated to spin coat a solution of polyimide in a solvent absent the necessary propylene glycol if they are

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expecting a smooth coating. Accordingly, the Applicants respectfully contend that as claim 1 has not been rendered obvious in view of Mishina, the dependent claims 2-6, 12-13, and 37 have also not been rendered obvious. Reconsideration and removal of the rejections is respectfully requested.

Claims 43-44 and 47-48 all ultimately depend from independent claim 42. Claim 42 is directed to a spin coating process where the weight average molecular weight of the thermoplastic polymer changes by less than or equal to about 10% during the entire process. Mishina fails to teach or suggest a spin coating process where the thermoplastic does not change in its weight average molecular weight of the claimed amount. Claim 43 further limits the solvent used in the spin coating process. As argued above, Mishina does not teach or suggest the particular limitation of the solvents used, to the exclusion of propylene glycol derivatives. As independent claim 42 has not been rendered obvious by Mishina, the dependent claims 43-44 and 47-48 have also not been rendered obvious. Reconsideration and removal of the rejections are respectfully requested.

Claims 45-46 and 49-50 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 6,715,200 to Feist et al. ("Feist") in view of U.S. Patent No. Mishina.

Claim 39 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Mashina in view of Feist and further in view of U.S. Patent No. 5,055,631 to Sartori et al. ("Sartori").

Claim 40 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Mashina in view of Feist in view of Japanese Patent Abstract 1991-017337 ("Kageyama")

Claim 41 is rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Mashina in view of Feist and further in view of U.S. Patent No. 5,589,523 to Sawaoka et al. ("Sawaoka") and U.S. Patent No. 4,842,740 to Chung et al. ("Chung"). Applicants respectfully traverse this rejection. Applicants respectfully traverse these rejections.

It is noted that the rejections over Feist are improper as Feist is not a proper reference. 35 U.S.C. §103(c) states:

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(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

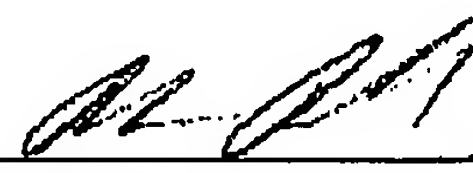
The subject matter of Feist and the claimed invention were, at the time the invention was made, subject to an obligation of assignment to the same person, namely, General Electric Company. Additionally, Feist only qualifies as prior art under 35 U.S.C. §102(e) since it published February 21, 2002, and the present application has a filing date of April 18, 2002, and a priority date of April 19, 2001. Hence, all of the rejections that rely upon Feist are not proper rejections. Reconsideration and withdrawal of these rejections are respectfully requested.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and withdrawal of the objection(s) and rejection(s) and allowance of the case are respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-1131.

Respectfully submitted,

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